SOFTWARE
RELEASE NOTES

For Version

CT-5631-H131-310CTU-C07_R01_4.5.5.27

Release Date: August 10, 2009

Introduction

The purpose of this document is to announce the general availability of software version H131-310CTU-C07_R01_4.5.5.27 for model CT-5631 NexusLink.

Revision Summary

Version	Date
H131-310CTU-C07_R01_4.5.5.27	8/10/2009
H131-310CTU-C06_R02_4.5.5.22	6/18/2009
H131-310CTU-C05_R01_4.5.5.22	3/19/2009
H131-310CTU-C04_R01_4.5.5.19	12/09/2008
H111-310CTU-C03_R06_4.5.5.9	8/14/2008
H131-310CTU-C03_R07_4.5.5.12	8/01/2008
H111-310CTU-C03_R04_4.5.5.9	7/01/2008
H111-310CTU-C03_R03_4.5.5.9	5/22/2008
H111-310CTU-C02_R03_4.5.5.3	3/19/2008

New Features

IGMP version is now selectable (V2/V3) in the Advanced Setup/LAN menu. This setting pertains to IGMP Proxy (WAN) in router-mode only.

Changes and Fixes

- Fixed an intermittent DNS relay issue where the connected LAN-side DHCP client would receive the modem's own LAN IP as the DNS server instead the DNS IP received from the network
- TR-069 field InternetGatewayDevice.DeviceInfo.ModelName now shows actual model name instead of board ID
- Fixed that LAN Statistics wouldn't increment when Virtual Ports feature was enabled
- Fixed a compatibility issue with P2P tool (ARES) running over an IPoA PVC
- Changed the TR-069 function InternetGatewayDevice.DeviceInfo.UpTime to start when SNTP is set and synced
- Modified TR-069 parameters for firewall and IGMP
- Fixed Boolean logic issue with ClearAccess ACS
- Changed TR-069 attribute WANPPPConnection.n.Enable from true/false to 1/0
- Status of LAN port 4 can now be read via TR-069
- Added a TR-069 VLAN MUX (802.1q) parameter
- For static DNS entries, the modem will provide its LAN IP (ie: 192.168.1.1) to LAN-side devices. When "obtain DNS server addresses automatically" is selected, the modem will pass the DNS IPs it received from the WAN interface to LAN-side device
- Moved Enable Full Cone NAT menu selection option directly underneath Enable NAT
- Revised the APUSER account by removing the ability to do software upgrades

Anomalies

- ATM statistics don't increment
- Eth0 appears as an interface in the initial port mapping menu
- SIP ALG needs to be set to 5060
- The password for "apuser" cannot be changed

Compatibility/System Notes

This release is backwards compatible with all versions listed in the revision summary.

For modem management purposes, a PC connected to a LAN port and using a static IP address should be configured for 192.168.1.3 or higher. When the modem is configured as a DHCP server, the first address it issues will be 192.168.1.3. This is because the modem reserves two addresses (one for each CPU). If the primary address is changed from its factory default 192.168.1.1 to, for example, 10.10.10.1, the secondary address will follow automatically (10.10.10.2).

This particular release supports Physical Layer Retransmission (PhyR) which operates at Layer 1 and uses a mechanism similar to TCP where retransmits occur if errors are detected. As a result the line is more robust (greater BER) while also allowing the INP to be set lower, thereby increasing the available data rate. PhyR is not configured on the modem but is negotiated automatically during the initialization process with the DSLAM (Broadcom proprietary). Versions supporting PhyR can be identified by the number 3 in the third character of the file name (example: H131-310CTU -C07_R01_4.5.5.27).

Normally the modem operates using two pairs, however when configured for non-bonding mode, the WAN connection is via the 2nd pair only. The 2nd pair uses the outer pins on the modem's ADSL connector (RJ-14 positions 1 and 4) and corresponds to the front-panel ADSL2 LED. Statistics for the 2nd pair can be seen at 192.168.1.2 or the modem's primary management IP address plus one.

IGMP Standard and Blocking modes apply only in instances where multicast traffic is present without a set top box first generating a join message. This condition is unlikely to occur since there's little reason for unsolicited multicast traffic to be present. However, if for some reason it is, in standard mode, multicast traffic will flood to all bridge ports (even if IGMP snooping is enabled) and in blocking mode, multicast traffic will be blocked. The purpose of the Enhanced IGMP feature is to prevent STBs from receiving IGMP reports from other LAN-attached STBs so as to ensure they'll always send IGMP report and leave packets even if watching the same channel.

MAC address considerations - Each modem contains a label indicating its LAN (base) MAC address. The source MAC address contained in upstream packets equals this address +3. Example: a CT-5631 with a base MAC ending in AA:10 will assign AA:13 to its 1st PVC. Additional PVCs will increment by one. This rule applies to bridge and routed PVCs alike. In the case of TR-069, the modem's base MAC address will be used.

Wireless security - Each modem's factory-default wireless settings consist of a unique SSID and WEP key. The SSID is Comtrend plus the last 4 characters of the modem's Ethernet MAC address (example: Comtrend741b). Network Authentication is Open and 64-bit WEP encryption will be enabled using a Network Key derived from the last 10 characters of the MAC address (example: 1d200c741b). This feature is enabled by default and can be disabled or changed as desired.

In the current software revision, the DHCP Option 60 Vendor ID for Comtrend modems is "uDHCP 0.9.6".

Port Mirroring – All Comtrend modems contain a troubleshooting/debugging aid called port mirror which makes it possible to monitor WAN traffic from the LAN using Wireshark or other tools. Incoming and outgoing traffic can be monitored separately or simultaneously from LAN port 1 or the USB port (where applicable). For more information on using this feature contact your Comtrend rep.

Historical

H131-310CTU-C06_R02_4.5.5.22

- The backup configuration filename has been changed from backupsettings.conf to *version_name*.conf. The name of the backup file will reflect the software revision resident on the modem (example: H131-310CTU-C06_R02_4.5.5.22.conf). The file name can be modified but should be preserved if the need arises to email it to Comtrend
- NAT is now enabled by default for PPP connections
- MTU value settings shall be restricted to 64-1500 (PPPoA) and 64-1492 (PPPoE)
- Hide login passwords when selecting view source in GUI
- If excessive PADI packets were received on the WAN interface, the modem might lockup over time. This condition was seen with the Calix E5 only
- SSID names are legible in the port mapping menu
- Corrected reset-to-factory default condition when WEP encryption was enabled and two or more WEP network keys were configured
- Fixed issue where wireless was enabled and wireless security was set, modem was unable to apply configuration changes it received from a Comtrend ACS
- Removed a previous modification forcing the modem to respond with an ACK to each FTP port command as this created a general LAN to WAN FTP issue. The original modification was required in only one known scenario, namely an FTP session from the modem's LAN to the management port of a Calix C7
- Fixed issue where PPPoE sessions wouldn't always reconnect after DSL retrain if the modem received excessive PADO packets from multiple broadband remote access servers

H131-310CTU-C05_R01_4.5.5.22

- Gratuitous ARP - In cases where the modem contains a static IP (i.e.; MER), this feature generates traffic enabling upstream equipment to populate its MAC table
- "Save Default configuration CLI Command". This allows the user to manually create their own factory default settings on a per modem basis. This is accomplished by simply

using the modem's GUI to create the desired configuration (save/reboot) then telnet to the modem and issuing a save command as such; *save_default --save* (space between default and the two dashes). There are also commands for clearing and reading the default settings; *save_default --clear*, *save_default –read*
- New modem management privilege level restricting menu access to changing the WiFi settings, software upgrades, configuring/viewing logs, running diagnostics and viewing all stats. This restricted GUI is accessed with the user name and password "apuser" (user name and password are case sensitive)
- Slave ADSL statistics are now available
- Modem now responds with an ACK to each FTP Port command
- Changed IGMP Snooping from polling to interrupt (Fast/Immediate Leave) so a port is removed immediately from a multicast group after a Leave Group message is received
- Port Mirroring responds bi-directionally
- DHCP Option 125 supports TR-111 (device identity is sent to the network)
- Modem reports the most recent 32K of its system log to an ACS
- Remote access can be enabled/disabled using the CLI
- Removed the PORT selection in Advanced Setup\WAN since this applied to VDSL2
- When configuring Virtual Server with a range, default ports such as 23 and 80 will be shifted accordingly
- "PPPoE persistently dialing" added to PAP mode
- Blocking, instead of Standard mode, is now the IGMP default setting

H131-310CTU-C04_R01_4.5.5.19
- Added PhyR-related statistics
- Unique SSID and WEP key for each wireless modem: (SSID = Comtrend plus the last 4 characters of the Ethernet MAC address. WEP with 64-bit encryption keys equal the last 10 characters of the MAC address) - enabled by default
- Telnet/SSH to WAN or LAN
- Can disable Full Cone NAT without having to delete the PVC
- In Routed Mode (MER, PPP, IP) the modem will assign a DHCP lease time of 24 hours regardless of PVC status
- Upgraded to the latest PhyR DSP
- Removed the "Inner-pair/Outer-pair" menu option

H111-310CTU-C03_R06_4.5.5.9
- DHCP lease time is 24 hours (non-PhyR version)

H131-310CTU-C03_R07_4.5.5.12
- Annex M for Slave DSL configured correctly using a backup configuration file
- With PVC set for MER with static IP, DHCP lease time is 24 hours
- Upgraded DSP and line driver to support PhyR

H111-310CTU-C03_R04_4.5.5.9
- Corrected CBR/UBR QoS queue
- Allow 8 or more PVCs to be configured
- Set 2nd management IP to be first plus one

- **H111-310CTU-C03_R03_4.5.5.9**
- Fixed upgrade issue when port mapping is enabled
- Adjusted WiFi default transmit output power to 17dBm
- Disabled the “Bridge PPPoE frames between WAN and LAN ports” feature and removed it from menu

H111-310CTU-C02_R03_4.5.5.3
- Add non-bonding mode to GUI
- Implement new DNS relay feature and default enable

UPGRADE PROCEDURE

1. **Upgrade Software**
    a. Open a web browser, connect to 192.168.1.1, and login with username **root** and password **12345** (or appropriate IP address and login info)
    b. Click Management→Update Software and select the Browse button
    c. Locate and double click on the appropriate Comtrend software image
    d. Select the Update Software button. The software image will be uploaded to the modem and the modem will reboot automatically upon completion
2. **Restore to Default**
    a. Hit the F5 Key to refresh your browser and reconnect to 192.168.1.1 to log back into the modem
    b. Click on the Management link
        I. Click on Settings
        II. Click on Restore Default
        III. Click the Restore Default Settings
3. **Verify**
    a. Hit the F5 Key to refresh your browser and reconnect to 192.168.1.1 to log back into the modem
    b. Click on Device Info
    c. Verify that the latest code is shown in the Software Version field: H131-310CTU-C07_R01_4.5.5.27.A2pB025c1.d20l
4. Upgrade and verification procedure is complete!

TECHNICAL SUPPORT

For technical support contact your Sales Engineer or Comtrend Support at 949-753-9640, Option 3. You can also submit questions and comments at http://www.comtrend.com/na/contact.htm

RMA REQUEST

Email or fax (949-753-9020) a completed RMA form to your Comtrend sales rep. If you don't have a form you can request one by calling 949-753-9640, Option 1 (sales). Additionally, if you have an FTP account, an RMA request form can also be downloaded from ftpsupport.comtrend.net in the generic product support folder.

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